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### **REMARKS**

Claims 1-20 are pending in this application. By this amendment, Applicants amend claims 1, 2, 4, 8, 9 and 12-15 and cancel claims 21 and 22.

Claims 1-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuriyama et al. (U.S. 6,068,499). This rejection is respectfully traversed.

Claim 1 has been amended to recite:

**"An electronic component comprising:  
an insulative case including a lower case portion and an upper case portion;  
a plurality of surface-mounting terminals mounted on said insulative case;  
at least one notch provided in and extending entirely through said lower case portion in a thickness direction from a top surface to a bottom surface thereof to accommodate a substantially L-shaped lead portion of at least one of said plurality of surface-mounting terminals; and  
said notch providing a clearance between said lower case portion and said substantially L-shaped lead portion of said at least one of said plurality of surface-mounting terminals such that said substantially L-shaped lead portion does not contact any part of the lower case portion so as to prevent the occurrence of capillary effect of solder applied to said electronic component."** (Emphasis added)

Claim 12 recites features that are similar to claim 1, including the emphasized features.

The Examiner again alleged that Kuriyama et al. teaches all of the features recited in claims 1 and 12 of the present application except for the notch "extending entirely through said insulative case in a thickness direction from a top surface to a bottom surface thereof". However, the Examiner alleged that to extend the notch entirely through the insulative case "is not patentably significant since they relate to the size of the article under consideration which is not ordinarily a matter of invention." The Examiner further alleged that "it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art."

In addition, in the Response to Arguments on page 3 and 4 of the outstanding Office Action, the Examiner alleged that "if the vertical extension is not necessary, the

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elimination of the part of notch, which serves as a protection against capillary effect, is an obvious expedient since it has been held that omission of an element and its function (only function of wide notch is antiwicking) in a combination where the remaining elements perform the same function as before involves only routine skill in the art." Applicants respectfully disagree.

As clearly seen in the attached marked-up copy of Fig. 1 of Kuriyama et al., the terminals 4 and 5 are in contact with the lower case portion of the case 2 at a lower surface A, a side surface B and an upper surface C. Thus, Kuriyama et al. clearly fails to teach or suggest "said notch providing a clearance between said lower case portion and said substantially L-shaped lead portion of said at least one of said plurality of surface-mounting terminals such that **said substantially L-shaped lead portion does not contact any part of the lower case portion so as to prevent the occurrence of capillary effect of solder applied to said electronic component**" (emphasis added) as recited in the present claimed invention. It is also noted that Fig. 2 of Kuriyama et al. is a perspective view of the structure of Fig. 1, and does **NOT** show a separate embodiment.

In Figs. 1, 5, 6 and 8 of the present application, the substantially L-shaped lead portion 34 of the movable terminal 31 and the substantially L-shaped lead portion 24 of the fixed terminal 21 clearly do not contact any part of the lower case portion 3, and in fact, gaps d1 and d2 (as seen in Figs. 6 and 8 of the present application) exist between the substantially L-shaped lead portions 34 and 24 and the lower case portion 3. In contrast, as clearly seen in Figs. 1 and 2 of Kuriyama et al., the lead portions 11 and 12 of the fixed and movable terminals 4 and 5 of Kuriyama et al. are **in contact with** the lower case portion of insulating case 2 at the three surfaces A, B, C indicated in the attached marked-up copy of Fig. 1 of Kuriyama et al.

In fact, Kuriyama et al. specifically discloses that "the lead section of the fixed terminal 4 **xtends along the outer surface of the sid wall 2A to th bottom of the insulating case 2** to form a connection end 11 which is approximately flush with a rear surface 2b of the insulating case 2. The lead section of the movable terminal 5 **extends along the outer surfac of th side wall 2B to the bottom of th in ulating cas 2**

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to form a connection end 12 which is approximately flush with the rear surface 2b of the insulating case" (see col. 5, line 62 to col. 6, line 3). In other words, Kuriyama et al. clearly teaches away from substantially L-shaped lead portions which do not contact any part of the lower case portion so as to prevent the occurrence of capillary effect of solder applied to said electronic component as recited in the present claimed invention. Accordingly, Kuriyama et al. cannot be relied upon in an obviousness rejection of Applicants' claimed invention since it is error to find obviousness where references diverge and teach away from the invention at hand. W.L. Gore & Assoc. v. Garlock Inc., 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983).

In contrast to the Examiner's allegation, to modify the "notch" of Kuriyama et al. so as to extend entirely through said lower case portion, as recited in the present claimed invention, would clearly involve much more than a mere change in size of the electronic component. In particular, the structural arrangement of the terminals 4 and 5 and the case 2 would have to be completely changed. For instance, if the "notch" of Kuriyama et al. was modified to extend entirely through the lower portion of the case, the terminals 4 and 5 would no longer be supported by the portion of the case 2 above the "notch". Thus, some undisclosed additional support structure would be necessary to support the terminals 4 and 5 within the case. In addition, the Examiner has failed to specifically describe how the "notch" would be modified if the size of the electronic device were changed, and has certainly failed to specifically describe how the "notch" would be modified such that the notch would extend completely through the lower portion of the case 2. Accordingly, Applicants respectfully submit that to modify the "notch" of Kuriyama et al. so as to extend entire through the lower portion of case 2 would not have been obvious, and further, that the mere reduction in the size of the electronic device of Kuriyama et al. would not result in a notch that extends entirely through the lower portion of the case 2.

Applicants are completely bewildered as to what element or range of values the Examiner is referring to with his allegation that "it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art." The present claimed invention does NOT

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recite any ranges of values which could be alleged to be discoverable by routine experimentation. The Examiner has completely failed to identify what, if any, recited range would have been discovered by routine skill in the art.

The Examiner's further alleged that "if the vertical extension is not necessary, the elimination of the part of notch, which serves as a protection against capillary effect, is an obvious expedient since it has been held that omission of an element and its function (only function of wide notch is antiwicking) in a combination where the remaining elements perform the same function as before involves only routine skill in the art." However, the vertical extension of the notch of Kuriyama et al. is clearly necessary to support the terminals 4 and 5 as noted above. In addition, contrary to the Examiner's allegation, the notch of Kuriyama et al. is NOT provided to prevent wicking. In fact, there is absolutely no disclosure or suggestion that the notch of Kuriyama et al. has the function of preventing wicking, but rather, is clearly disclosed as being provided merely to enable the connection ends 11 and 12 of the terminals 4 and 5 to be approximately flush with the rear surface of the insulating case 2, so as to facilitate surface mounting (see, col. 6, lines 23-26 of Kuriyama et al.). This requires the direct contact between the terminals 4 and 5 Kuriyama et al. with AT LEAST the lower surface of the lower case portion of the case 2. Kuriyama et al. fails teach or suggest anything at all about antiwicking, and certainly fails to teach or suggest that the notch of Kuriyama et al. is provided to prevent wicking.

Thus, Applicants respectfully submit that Kuriyama et al. it would not have been obvious to modify the notch of Kuriyama et al. so as to extend entirely through the lower case 2, as alleged by the Examiner.

Accordingly, Applicants respectfully submit that Kuriyama et al. fails to teach or suggest the unique combination and arrangement of elements recited in claims 1 and 12 of the present invention.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1 and 12 are allowable. Claims 2-11 and 13-20 depend upon claims 1 and 12, and are therefore allowable for at least the reasons that claims 1 and 12 are allowable.

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In view of the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-month extension of time, extending to September 20, 2003, the period for response to the Office Action dated May 20, 2003.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,



Attorneys for Applicant

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

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**KEATING & BENNETT LLP**  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200  
Facsimile: (703) 385-5080

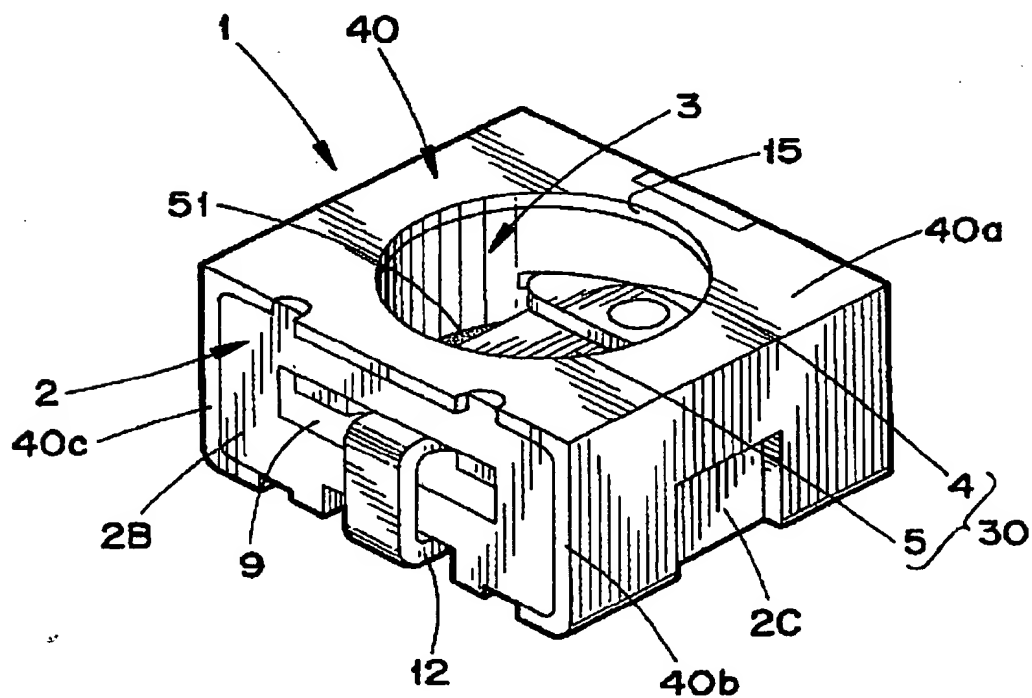
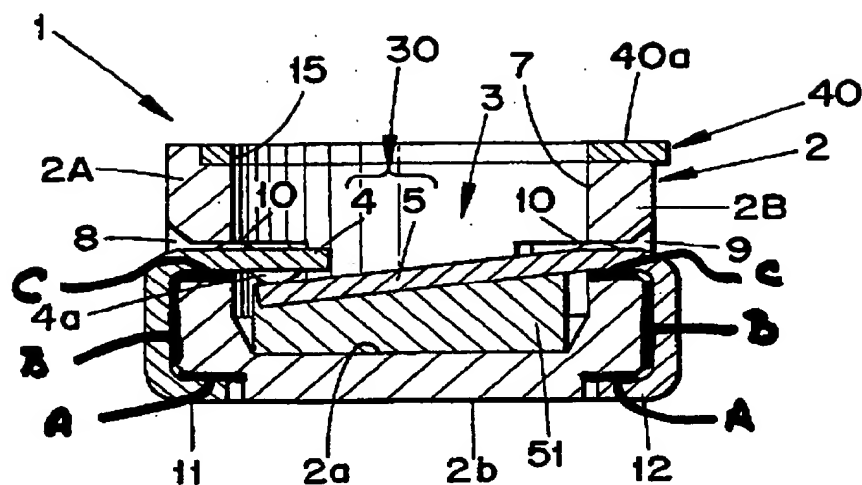
# U.S. Patent

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**6,068,499**

**Fig. 1**



**Fig. 2**